

**Amendments to the Claims:**

The listing of the claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

Claims 1-22 (canceled)

Claim 23 (currently amended): A method of identifying genes associated with osteogenesis or adipogenesis that are modulated by  $\Delta$ FosB comprising

- (a) inducing  $\Delta$ FosB in a cell associated with osteogenesis or adipogenesis;
- and
- (b) determining which genes associated with osteogenesis or adipogenesis are differentially expressed in said cell, thereby identifying genes that are modulated by  $\Delta$ FosB.

Claim 24 (previously presented): The method of claim 23, wherein step (b) is performed using a yeast two-hybrid system or hybridization of cellular nucleic acids to a DNA chip.

Claims 25-30 (canceled)

Claim 31 (previously presented): The method of claim 23, wherein the cell is an *in vitro* cell.

Claim 32 (previously presented): The method of claim 31, wherein the cell is selected from the group consisting of calvarial cell, osteoblast, osteoclast, chondrocyte, and pluripotent precursor cell.

Claim 33 (previously presented): The method of claim 32, wherein the osteoblast is

selected from the group consisting of MC3T3-E1, C2C12, MG-63, U2OS, UMR106, ROS 17/2.8, and SaOS2.

Claim 34 (previously presented): The method of claim 31, wherein the method further comprises obtaining cell lysates from the *in vitro* cell for determining which genes are differentially expressed.

Claim 35 (previously presented): The method of claim 31, wherein the method further comprises obtaining nuclear extracts from the *in vitro* cell for determining which genes are differentially expressed.

Claim 36 (previously presented): The method of claim 23, wherein inducing  $\Delta$ FosB comprises exposing the cell to an agent selected from the group consisting of cocaine, amphetamine, nicotine, opiate, antidepressant, and antipsychotic agent.

Claim 37 (previously presented): The method of claim 23, wherein the cell is an *in vivo* cell.

Claim 38 (previously presented): The method of claim 23, wherein the cell is in an animal.

Claim 39 (previously presented): The method of claim 38, wherein the animal is a transgenic animal.

Claim 40 (previously presented): The method of claim 23, wherein the method is performed in a high throughput format.

Claim 41 (previously presented): The method of claim 23, wherein the method is performed using a DNA chip.

Claim 42 (previously presented): The method of claim 23, wherein step (b) comprises isolating RNA from the cell.

Claim 43 (previously presented): The method of claim 42, wherein step (b) comprises obtaining an RNA expression pattern.

Claim 44 (previously presented): The method of claim 43, wherein the RNA expression pattern is obtained using a DNA chip, Northern analysis, RT PCR, RNase protection, or subtractive hybridization.

Claim 45 (currently amended): A method of identifying genes associated with osteogenesis or adipogenesis that are modulated by  $\Delta$ FosB comprising

- (a) inducing  $\Delta$ fosB in a cell culture, wherein the cells are associated with osteogenesis or adipogenesis; and
- (b) determining which genes associated with osteogenesis or adipogenesis are differentially expressed in said cells, thereby identifying genes that are modulated by  $\Delta$ FosB.

Claim 46 (previously presented): A method of claim 45, wherein the method is performed using cell lysates.

Claim 47 (previously presented): A method of claim 45, wherein the method is performed using nuclear extracts.

Claim 48 (new): A method of claim 31, wherein the cell is selected from the group consisting of adipocyte and preadipocyte.

Claim 49 (new): A method of claim 48, wherein the adipocyte is selected from the group

consisting of 3T3 F422 A, and ob 1771.

Claim 50 (new): A method of claim 49, wherein the preadipocyte is 3T3-L1 preadipocyte.